REMARKS/ARGUMENTS

The Examiner rejected 1-5, 7-9, 11-15, 17-19, 21-25, and 27-29 as obvious (35 U.S.C. §103(a)) over Popp (Pub No. US 2002/0133437) in view of Prinzing (U.S. Patent No. 6,496,202). Applicant traverses the rejections for the following reasons.

Amended independent claims 1, 11, and 21 concern generating an interface to elements in a document, wherein the document defines a relationship of the elements and at least one attribute for each element. These claims require: providing a mapping indicating at least one element in the document to map to a class and an interface to generate for the class, wherein the interface defines methods to access the element for which the class is generated, and wherein each element comprises a logical part of the document having a marked start and end; and generating the class and the interface implementing methods for the at least one element from information provided on elements in the document and the mapping, wherein the at least one indicated element in the document for which the class is generated can be accessed and affected by the methods implemented in the class.

Applicants amended the independent claims to add the requirement that each element comprises a logical part of the document having a marked start and end. This requirement is disclosed on at least pg. 1, lines 13-15 of the Specification. During the phone interview, the Examiner indicated that such an amendment would appear to distinguish over the cited art and requested Applicants to submit this amendment in an RCE for consideration. Applicants submit that the amended claims distinguish over the cited art for the following reasons.

The Examiner cited the above discussed pg. 2 pars. [0026]-[0027] and pg. 5, pars. [0069]-[0070] of Popp as disclosing the generating requirement (Final Office Action, pg. 3), which requires generating the class and the interface implementing methods for the at least one element from information provided on elements in the document and the mapping, wherein the at least one indicated element in the document for which the class is generated can be accessed and affected by the methods implemented in the class.

The cited pg. 2 of Popp discusses defining classes of objects for each HTML element that has the effect of "providing a one-to-one mapping between each HTML element and object classes." (Pg. 2, par. 0026). Although the cited pg. 2 discusses mapping HTML elements to object classes, nowhere does the cited pg. 2 anywhere teach or suggest providing a mapping

indicating at least one element to map to a class and an interface for the class defining methods to access the elements for which the class is generated.

The cited pg. 2 mentions that classes of objects are defined for each HTML element to provide a mapping. However, there is no teaching in the cited Popp of the claim requirement of providing a separate mapping that is used along with the document to generate the class and the interface implementing methods for the element.

The cited pg. 5, paras. [0069]-[0070] of Popp discusses how the HTML template is parsed to generate an object tree based on identified HTML elements, and that an HTML object is instantiated for the objects in the object tree. This cited pg. 5 of Popp teaches away from the claim requirement of using a separate "mapping" structure indicating at least one element in the document to map to a class to generate the classes implementing methods for the elements. Instead, Popp generates an object tree based on the HTML elements, but not from both a mapping and the document as claimed..

Nowhere does Popp teach or suggest generating a class and interface implementing methods for one element from information on elements in the document and the mapping. Instead, the cited Popp discusses how an object tree is generated based on the HTML elements, and that an HTML object is instantiated for each element. Each object class can include methods to manipulate the object classes generated from the HTML elements. (Pg. 2, par. 26). Nowhere does the cited Popp teach or suggest using a mapping as well as the document to generate the class and interface implementing methods for one element from information on elements in the document and the mapping.

Moreover, the cited Popp teaches away from using a mapping to generate classes for the elements. For instance, Popp discusses how an object tree of element objects is generated from the HTML document and that each object in the object tree corresponds to an object class which is instantiated. (Pg. 5, para. 0075.). Thus, Popp does not teach the claim requirement of using a mapping indicating a mapping of elements to a class and interface and information on the elements in the document to generate a class and interface implementing methods for document elements as claimed. Instead, Popp parses the HTML document to generate an object tree, and then instantiates an object class for the element. Although the cited Popp mentions instantiating a class for an element, the cited Popp still does not teach or suggest providing a mapping such

that the class and interface for one element is generated from information on the elements and a mapping. In the cited Popp, there does not appear to be a need for providing a mapping because each object in the tree corresponding to an HTML element already corresponds to an object class. See, para. [0075].

The Examiner cited col. 8, lines 9-19, col. 9, lines 57-66, col. 10, line 64 to col. 11, line 2, and col. 11, lines 10-12 and 35-63 of Prinzing as teaching the claim requirement that the mapping indicates at least one element to map to an interface to generate for the class, wherein the interface defines methods to access the element. (Final Office Action, pgs. 3-4)

The cited col. 8 mentions that an object consists of data and operations or procedures that can be performed on that data and the cited col. 9 mentions that a model is implemented as an object class, and that document 666 implements a set of methods. The cited cols. 10-11 mention that an interface is used to define the API implemented by an object class. "Document" is an interface implemented by each of the documents. The cited col. 11 mentions an element of a model can be queried and describes methods implemented for an element.

Although the cited Prizing describes interfaces having methods to perform operations for an element, nowhere does the cited Prizing teach or suggest generating the interface implementing methods for the element from information on the element in the document and the mapping. Thus, although the cited art may describe interfaces and classes for elements, nowhere does the cited art anywhere teach or suggest the claimed technique for using a mapping and information provided on elements in the document to generate the class and interface for an element. Even if one were to combine Prizing with Popp as suggested by the Examiner, the cited combination still does not teach or suggest all these claim requirements, especially the limitation of providing a mapping indicating at least one element in the document to map to a class and an interface to generate for the class

In the Response to Arguments, the Examiner found that the claims do not claim how that mapping is used to generate the class for elements in the document. (Final Office Action, pg. 8). Applicants traverse this finding, because the independent claims recite that the mapping indicates at least one element in the document to map to a class. Thus, the claims do describe "how" that mapping is used to generate the class and interface for the elements because the mapping indicates at least one element in the document to map to a class and an interface to generate for

the class. This claimed information in the mapping describes how to generate the class and the interface.

The Examiner found that the argued "mapping data structure" was not claimed. (Final Office Action, pg. 9). Applicants traverse because the claimed "mapping" element is a data structure because the claims specify that the "mapping""indicate[es] at least one element in the document to map to a class and an interface to generate for the class." Thus, the "mapping" is necessarily a data structure because it is an entity that has information as claimed. Further, the Specification describes the mapping 6 as a document 160 (FIG. 5). (Final Office Action, pg. 13)

Accordingly, Applicant submits that amended claims 1, 11, and 21 are patentable over the cited art because Popp does not teach or suggest all the claim requirements.

Dependent claims 2-5, 7-10, 12-15, 17-20, 22-25, and 27-30 are patentable over the cited art because they depend from claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above. Moreover, the below discussed dependent claims provide additional grounds of patentability over the cited art.

Claims 2, 12, and 22 depend from claims 1, 11, and 21 and further require that the mapping includes a class name for each indicated element. The Examiner cited pg. 2, para 0026 and pgs. 4-5, para. 0063 of Popp as disclosing the additional requirements of these claims. (Final Office Action, pg. 4) Applicant traverses.

The cited Popp mentions that the name of the object class can mirror the name of the corresponding HTML element to provide an easy association. Although the cited Popp mentions how the object classes in the object tree can use the HTML element name, nowhere does the cited Popp teach or suggest the claim requirement that a mapping indicating elements in the document to map to a class also include a class name for the element to map. Nowhere does the cited Popp teach a mapping having a class name for each element that is used to generate the class and interface for the element with that name.

Accordingly, claims 2, 12, and 22 provide additional grounds of patentability over the cited art.

Claims 3, 13, and 23 depend from claims 1, 11, and 21 and further require that the mapping indicates a data type for at least one attribute of the indicated element. The Examiner

cited col. 9, lines 33-36 and col. 12, lines 1-2 of Prinzing as disclosing the additional requirements of these claims. (Final Office Action, pg. 4) Applicant traverses.

The cited cols. 9 and 12 mention that a TYPE attribute may be associated with an element. Although the concept of as TYPE for elements is known, nowhere does the cited Prinzing anywhere teach or suggest the claim requirement that a mapping indicating elements in the document to map to a class also indicate a type for an attribute of an element to map to a class. Nowhere does the cited Prinzing anywhere teach or suggest a separate mapping data structure that provides data type for attributes of elements. Instead, the cited Prinzing discusses an element TYPE in general.

Accordingly, claims 3, 13, and 23 provide additional grounds of patentability over the cited art.

Claims 4, 14, and 24 depend from claims 1, 11, and 21 and further require that the relationship of the elements in the document are arranged in a hierarchical relationship, and wherein the methods in the at least one class generated for the element allow a user to directly access and affect the element in the document. The Examiner cited pg. 2, paras. 0024 and 0026 of Popp as disclosing the additional requirements of claims 4, 14, and 24. (Final Office Action, pg. 5) Applicant traverses for the following reasons.

The cited Popp mentions that the object calls includes methods to manipulate the HTML element in the HTML document. However, in operation, Popp teaches away from accessing and manipulating the elements directly within the document and instead generates an object tree of objects, where the objects store the properties of each element (para. [0050] that can be manipulated. The objects in the tree are used to render the Web page definition (i.e., HTML document). (Popp, para. [0069]). Thus, although Popp mentions that the HTML elements within the HTML document (Popp, para. [0050]), the cited Popp is manipulating the elements as objects in the separate object tree. Nowhere does the cited Popp anywhere teach or suggest allowing a user to use methods to directly access and affect the elements in the document. Instead, with Popp, the classes are used to manipulate the objects in the object tree or generate the HTML document from the objects. Popp does not each using classes generated for the elements to affect the elements within the document.

The Examiner further cited col. 8, lines 9-19 and col. 11, lines 10-12 of Prinzing as teaching the requirements of these claims. (Final Office Action, pg. 5) The cited col. 8 mentions that an object consists of data and operations or procedures that can be performed on that data. The cited col. 11 mentions an element of a model can be queried and describes methods implemented for an element. Nowhere does the cited Prinzing anywhere teach or suggest allowing a allow a user to generate and use methods to directly access and affect elements in the document.

Accordingly, claims 4, 14, and 24 provide additional grounds of patentability over the cited art.

Claims 7-10, 17-20, and 27-30 are patentable over the cited art because they depend from claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above, and because their additional requirements in combination with the base and any intervening claims provide further distinction over the cited art. Moreover, the Examiner rejected claims 10, 20, and 30 as obvious over Popp in view of Skinner (U.S. Patent No. 6,085,198). However, Skinner was applied for the additional requirements of claims 10, 20, and 30, not the requirements of the base claims 1, 11, and 21 which in combination with the dependent claims provide still further grounds of patentability over the cited art.

Applicants added claims 31, 32, and 33 that depend from claims 1, 11, and 21, and further require that the document comprises an Extended Markup Language (XML) document. This added requirement is disclosed on at least page 5, lines 11-21 of the Specification.

Applicants submit that these added claims are patentable over the cited art because they depend from one of claims 1, 11, and 21, which are patentable over the cited art for the reasons discussed above, and because the additional requirements of the dependent claims in combination with the base claims provide further grounds of patentability over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1-5, 7-15, 17-25, and 26-33 are patentable over the art of record. Applicant submit herewith the claim and RCE fees. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0460.

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The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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